

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANDREW M. PROEHL, MATTHEW S. CHANG,
ADITYA KRISHNAN, DAVID K. L. YANG, FRED J. ZUSTAK,
PETER RAE SHINTANI, MARK KENNETH EYER,
NICHOLAS COLSEY, BRANT L. CANDELORE,
and DAYAN IVY GOLDEN

Appeal 2008-0315
Application 09/798,814¹
Technology Center 2100

Decided: June 5, 2008

Before JEAN R. HOMERE, JAY P. LUCAS, and
ST. JOHN COURTENAY III, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Filed on March 02, 2001. The real party in interest is Sony Corp./Sony Electronics, Inc.

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1, 3 through 18, and 20 through 29. Claims 2 and 19 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

The Invention

As depicted in Figure 2, Appellants invented a method and system for customizing the channel map of a set-top box (22) to enable a user to easily navigate among a very large number of available channels from different media sources (10, 27, 28). (Spec. 3.) As shown in Figure 7, the channel map includes a virtual channel map (700), which in turn, includes a central ring (702) of inputs from the media sources (704, 706, 708, 710). Each of said media sources includes an outer ring (712, 714, 716, 718) of virtual channels (A1..B1..C1..D1..) (*Id.* 17.) Upon receiving from a user a selection of a desired channel on the map, the set-top box (22) retrieves the selected channel from the corresponding media source and displays it on a TV receiver (24). (*Id.*)

An understanding of the invention can be derived from exemplary independent claim 1, which reads as follows:

1. A method for controlling the operation of a multimedia network having a plurality of media inputs from a plurality of available media

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sources and at least one output to an audio visual display, said method comprising:

assigning a channel map relating one or more of the plurality of media inputs from the plurality of media sources to a corresponding virtual channel;

wherein, said channel map comprises a central ring of media inputs from the plurality of available media sources and a plurality of outer rings of virtual channels of content available from each of the plurality of media sources, and wherein each outer ring is linked to the central ring at one of the media sources;

determining a selected virtual channel in response to one or more user inputs from a user of the multimedia network; and

configuring the multimedia network to process a multimedia input from a media source assigned to said selected virtual channel and to display it on said audio visual display.

In rejecting the claims on appeal, the Examiner relied upon the following prior art:

Rosin	US 6,028,600	Feb. 22, 2000
Croy	US 6,509,908 B1	Jan. 21, 2003
		(filed Feb. 4, 2000)

The Examiner rejected the claims on appeal as follows:

Claims 1, 3 through 18, and 20 through 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Rosin and Croy.

FINDINGS OF FACT

The following findings of fact (FF) are supported by a preponderance of the evidence.

Rosin

1. Rosin discloses a rotary menu wheel as a single coherent interface for allowing a user to easily access channels from different media sources for display on a TV receiver. (Abstract, col. 12, ll. 7-9.)

2. As depicted in Figure 1, Rosin discloses a set-top box (12) having connected thereto an output TV receiver (14), and a plurality of input media sources (16, 17, 19), each of said media having a plurality of virtual channels. (Col. 4, ll. 13-25.)

3. As shown in Figure 8, a user can customize the rotary wheel menu (80) by displaying thereon selected channels of the different input media in such a way to easily navigate among a large number of channels. (Col. 9, l. 35- col. 10, l. 18.)

4. The channels can be organized in a circular queue for display in the order specified by the user. The channels can be rotated out of view to update their display order on the wheel as desired by the user. (Col. 8, ll. 50-55, col. 10, ll. 20-29.)

Croy

5. Croy discloses a portable navigator (PN) for allowing a user to monitor and control input media devices connected thereto. The disclosed

PN allows the user to easily display a selected channel on a display monitor. (Col. 3, ll. 4-11.)

6. As shown in Figure 2, Croy discloses that the PN (200) may consist of a set-top box, wherein each of the input media sources connected thereto includes a plurality of channels from which a user can select desired programs for display via a built-in menu hierarchy selection. (Col. 3, ll. 15-24, col. 7, ll. 58-67.)

7. The menu hierarchy selection allows the user to activate a menu from the top, and to access submenus of channels down the hierarchy. (Col. 8, ll. 1-24.)

PRINCIPLES OF LAW

OBVIOUSNESS

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'

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KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1734 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

(“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”). *Leapfrog Enter., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (quoting *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41(2007)). “One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims.” *KSR*, 127 S. Ct. at 1742.

Discussing the obviousness of claimed combinations of elements of prior art, *KSR* explains:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique

has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida* [v. *AG Pro, Inc.*, 425 U.S. 273 (1976)] and *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969)] are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

KSR, 127 S. Ct. at 1740. Where the claimed subject matter cannot be fairly characterized as involving the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, a holding of obviousness can be based on a showing that there was “an apparent reason to combine the known elements in the fashion claimed.” *KSR*, 127 S. Ct. at 1741. Such a showing requires “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, 127 S. Ct. at 1741 (quoting *In re Kahn*, 441 F.3d 977, 987(Fed. Cir. 2006)).

The reasoning given as support for the conclusion of obviousness can be based on interrelated teachings of multiple patents, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art. *KSR*, 127 S. Ct. at 1740-41. See also *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2007).

We note our reviewing court has recently reaffirmed that:

[A]n implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the ‘improvement’ is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal—and even common-sensical—we have held that there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves. In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him capable of combining the prior art references.

Leapfrog, 485 F.3d at 1162 (holding it “obvious to combine the Bevan device with the SSR to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost”).

Also, a reference may suggest a solution to a problem it was not designed to solve and thus does not discuss. *KSR*, 127 S. Ct. at 1742 (“Common sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle. . . . A person of ordinary skill is also a person of ordinary creativity, not an automaton.”).

The prior art relied on to prove obviousness must be analogous art.

As explained in *Kahn*,

the ‘analogous-art’ test . . . has long been part of the primary Graham analysis articulated by the Supreme Court. *See Dann [v. Johnston,]* 425 U.S. [219,] 227-29 (1976), *Graham*, 383 U.S. at 35. The analogous-art test requires that the Board show that a reference is either in the field of the applicant's endeavor or is reasonably pertinent to the problem with which the inventor was concerned in order to rely on that reference as a basis for rejection. *In re Oetiker*, at 1447. References are selected as being reasonably pertinent to the problem based on the judgment of a person having ordinary skill in the art. *Id.* (“[I]t is necessary to consider ‘the reality of the circumstances,’—in other words, common sense—in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.” (quoting *In re Wood*, 599 F.2d 1032 (C.C.P.A. 1979))).

Kahn, 441 F.3d at 986-87. *See also In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992) (“[a] reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.”).

In view of KSR’s holding that “*any* need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed,” 127 S. Ct. at 1742 (emphasis added), it is clear that the second part of the analogous-art test as stated in *Clay, supra*, must be expanded to require a

determination of whether the reference, even though it may be in a different field from that of the inventor's endeavor, is one which, because of the matter with which it deals, logically would have commended itself to an artisan's (not necessarily the inventor's) attention in considering *any* need or problem known in the field of endeavor. Furthermore, although under *KSR* it is not always necessary to identify a known need or problem as a motivation for modifying or combining the prior art, it is nevertheless always necessary that the prior art relied on to prove obviousness be analogous. *See KSR*, 127 S. Ct. at 1739. (“The Court [in *United States v. Adams*, 383 U.S. 39, 40 (1966)] recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another *known in the field*, the combination must do more than yield a predictable result.”) (emphasis added). *See also Sakraida*, 425 U.S. at 280

(“Our independent examination of that evidence persuades us of its sufficiency to support the District Court's finding ‘as a fact that each and all of the component parts of this patent . . . were old and well-known throughout the dairy industry long prior to the date of the filing of the application for the Gribble patent.’”).

ANALYSIS

Independent claim 1 recites in relevant part a channel map including a central ring of media inputs, each having an outer ring of virtual channels connected thereto. (App. Br. 12.) Appellants argue that the combination of Rosin and Croy does not teach these limitations. (*Id.* 6-9.) Particularly,

Appellants submit that the cited combination discloses a hierarchical menu structure for accessing selected channels of input media sources. However, Appellants submit that such disclosure does not teach or suggest a central ring of media inputs, wherein each of the media inputs includes an outer ring of virtual channels connected thereto. (*Id.*) Further, Appellants argue that the Examiner failed to provide sufficient rationale for combining the teachings of the cited references to render the claimed invention unpatentable. (*Id.*)

The Examiner, in response, avers that the combination of Rosin and Croy teaches a hierarchical ring network for a multi-layered menu, wherein the top layer teaches or suggests the central ring, and the submenus in subsequent layers teach or suggest the virtual channels in the outer rings connected thereto. (Ans. 9-11.)

Therefore, the pivotal issue before us is whether one of ordinary skill in the art would have found sufficient rationale to modify Rosin and Croy's combined teachings of a hierarchically structured menu of virtual channels to arrive to the claimed rings of virtual channels? We answer this inquiry in the affirmative.

As detailed in the Findings of Facts (FF) section above, Rosin discloses a rotary menu wheel interface for arranging thereon the virtual channels associated with input media devices connected to a set-top box. (FF. 1-4.) Further, Croy discloses a multi-layered menu for storing and accessing virtual channels associated with input media devices connected to

a set-top box. (FF. 5-6.) One of ordinary skill would readily recognize that both Rosin's wheel and Croy's hierarchical menu teach a channel map including media inputs and a list of virtual channels corresponding associated therewith. Further, we agree with the Examiner that the ordinarily skilled artisan would also recognize that the top layer of Croy's hierarchical menu, like the claimed central ring, teaches a parent node for connecting the media inputs to the set-top box. Additionally, we agree with the Examiner that the ordinarily skilled artisan would also recognize that subsequent layers in Croy's submenus, similarly to the claimed outer rings, teach a plurality of children nodes for connecting the virtual channels corresponding to each of the input devices.

We note that Appellants' arguments attempt to confine the channel map to the central ring and the plurality of outer rings of virtual channels connected thereto, while ignoring the functionality of such rings. Such arguments are not persuasive. The mere arrangement of the channels on the map in a circular fashion appears to be a matter of display preference that would be within the skill level of the ordinary artisan. In fact, as recognized by the Examiner, the claimed two layers of rings for arranging the virtual channels simply amount to a hierarchical ring network of virtual channels similarly to the hierarchical channel layout taught by the Rosin-Croy combination. Both channel maps seek to facilitate the user's monitoring and management of the very large number virtual channels of the input devices.

Additionally, Appellants' allegation that there is insufficient rationale to combine the cited references is not persuasive. The Supreme Court has held that in analyzing the obviousness of combining elements, a court need not find specific teachings, but rather may consider "the background knowledge possessed by a person having ordinary skill in the art" and "the inferences and creative steps that a person of ordinary skill in the art would employ." *See KSR Int'l*, at 1740-41. To be nonobvious, an improvement must be "more than the predictable use of prior art elements according to their established functions." *Id.* at 1740. As set forth in the preceding paragraph, hierarchically arranging virtual channels of a plurality of input devices is a prior art teaching that is being used in a conventional multimedia network for the known purpose of effectively monitoring and managing a very large number of virtual channels.

It follows that Appellants have not shown that the Examiner erred in concluding that the combination of Rosin and Croy renders claim 1 unpatentable.

Appellants did not provide separate arguments with respect to the rejection of claims 1, 5 through 7, 11, 13 through 18, 22, 23 through 25, 27, and 28. Therefore, we select claim 1 as being representative of the cited claims. Consequently, claims 5 through 7, 11, 13 through 18, 22, 23 through 25, 27, and 28 fall together with representative claim 1. 37 C.F.R. § 41.37(c)(1)(vii).

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Regarding the rejection of claims 3, 4, 8 through 10, 12, 20, 21, 26, and 29, Appellants merely allege that the combination of Rosin and Croy does not teach the limitations of the cited claims. Beyond these mere allegations, Appellants have not provided any meaningful analysis specifically pointing out how the language of the claim patentably distinguishes over the cited combination. A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim. *See* 37 C.F.R. § 41.37(c)(1)(vii). In our view, these gratuitous allegations are insufficient to effectively rebut the Examiner's prima facie case of obviousness. It follows that Appellants have not shown that the Examiner erred in concluding that the combination of Rosin and Croy renders claims 3, 4, 8 through 10, 12, 20, 21, 26, and 29 unpatentable.

SUMMARY

Appellants have not shown that the Examiner erred in concluding that the combination of Rosin and Croy renders claim 1, 3 through 18, and 20 through 29 unpatentable under 35 U.S.C. § 103(a).

DECISION

We affirm the Examiner's decision rejecting claims 1, 3 through 18, and 20 through 29.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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